DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, S.W., WASHINGTON, D.C. 20032

November 24, 2004

Ms. Karen Johnson, Chief
Safe Drinking Water Act Branch
United States Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Re: Administrative Order, Paragraph #63
Plan for Update of Materials Evaluation and Lead Service Inventory
First Quarterly Status Report

The Administrative Order for Compliance on Consent (Docket No. SDWA-03-2004-029DS), paragraph 63, requires quarterly progress reports regarding the activities undertaken by WASA to implement the plan in compliance with this paragraph. The following constitutes the first quarterly status report. As you are aware, the plan was approved by EPA by letter dated September 29, 2004.

For convenience, we are repeating or paraphrasing the elements of the approved plan below and are then providing a brief status report on each activity, shown in **bold type**. Where we have updated the original plan that was submitted, we have shown the updates in **[brackets and bold type].**

1. Establish a baseline inventory of the estimated number of lead service lines in the DCWASA distribution system as of June 30, 2001 (June '01 Baseline Inventory)

Status: Baseline inventory completed and submitted to EPA by letter dated September 1, 2004.

2. Initially update the June '01 Baseline Inventory and submit to EPA by September 1, 2004. Update June '01 Baseline Inventory each September 1 thereafter by adding service lines that are identified by subsequent efforts to be lead and subtracting service lines that subsequently are identified as copper or brass. Based on the updates to the June '01 Baseline Inventory, recalculate the number of lead service lines to be replaced by September 30, 2004 and every September 30 thereafter.

Status: Initial update of inventory completed and submitted to EPA by letter dated September 1, 2004.

3. Inventory Update

    a) DCWASA proposed as follows:

        i. Field determination of the materials of construction for 1,200 service lines currently listed as "unknown" will be undertaken during the 2005 replacement period (i.e. October 1, 2004 through September 30, 2005). The actual material of construction for these lines will be determined by no-dig or test pit technology. The identification will update our inventory and will also provide data that can be used for the assessment approach described below.

        Furthermore, by letter dated September 7, 2004 WASA supplemented this proposed approach. In this letter WASA explained that it intends to use this no-dig method to determine the material of the 1,200 selected addresses. However, WASA plans to also test pit the first 100 no-dig determinations. WASA has already verified the no-dig method with 85 test pits to date; however, it is felt that this additional verification will provide an added measure of confidence.

        If the additional 100 additional verifications, using the no-dig method and duplicate test pits, shows a virtually 100% accuracy WASA proposes to eliminate the duplicate test pits and rely on the no-dig for the remainder of the majority of the 1,100 addresses. There will be instances where, under certain environmental field conditions, the output of the no-dig protocol is expected to be inconclusive. In these cases WASA will err on the safe side and confirm the materials of construction using the test pit protocol.

Status: WASA has identified 100 sites for the concurrent no-dig and test pit material determination. WASA has contracted for the no-dig test and these determinations are underway. Following the completion of the no-dig test an existing WASA contractor will perform test pit excavations to physically determine the service line material. WASA's projected schedule is to complete both the no-dig determinations and test pit determinations by early February and to correlate the results by early March 2005. Also, WASA is working to modify an existing contract to include additional test pit excavations or bid a new contract solely for test pit excavations. It is

scheduled that WASA will then complete the remainder of the no-dig and/or test pit determinations of the remaining 1100 sites by June 2005.

ii. DCWASA will replace 2,500 lead service lines during FY '05. **[WASA's current goal is replace up to 2800 services.]** Experience has shown that it will be necessary to test pit approximately 3,750 **[4200 with increased goal]** services in order locate 2,500 **[2800]** lead services. Thus material information on these 3,750 **[4200]** service lines will also be entered into the CIS. The service material information will also provide data that can be used to assess other unknown services as described below.

Status: Construction is progressing on the 2005 replacement program. Data is being gathered regarding the material of the service at the replacement addresses as well as material determinations done during other test pits made on the blocks where replacement is underway but replacement is not actually performed.

iii. DCWASA data from the FY'03 and FY'04 replacement programs will be entered into the CIS. WASA has replaced, or will replace 2,200 lead service lines. **[As reported, WASA replaced 385 services in 2003 and 1,793 were replaced in 2004 for a total of 2178.]** In implementing this program, WASA has dug, or will dig approximately 3,300 test pits to verify the 2,200 **[2178]** lead service lines. This information will be entered into CIS and will be used to update our inventory. It will also be used to assess other unknown services as described below.

iv. Using the 1,200 unknown material determinations, 3,750 **[4200]** material determination from the 2005 program, and over 3,300 material determinations from the 2003 and 2004 programs, WASA will:

- Assess to what extent date of service is an accurate determiner of material
- Assess to what extent water test results (second draw) is an accurate determiner of material and to determine test level (concentration in ppb) that is the threshold indicator.
- Assess to what extent size of service is an accurate determiner of material

v. WASA will analyze the data collected from these over 8,000 material determinations versus the potential positive determiners; water test results, age and size. Statistical correlations will be done using this data by August 1, 2005. Also by September 1, 2005 WASA will submit a plan to EPA to resolve the remaining unknown services not actually physically determined to that date.

Status: All data compiled for replacement years 2003, 2004 and 2005 to the time of analysis will be combined with the 1200 direct determinations. Analysis of this data is planned for June and July 2005 with preliminary findings of the statistical analysis ready by August 1, 2005. By September 1, 2005 WASA will submit a plan to EPA to resolve the remaining unknown services (see WASA letter to EPA dated September 7, 2004).

b) DCWASA will use its Customer Information System (CIS) database to evaluate services presently listed as "unknown". As mentioned above, significant programming changes are necessary to accomplish this CIS modification and they will not be completed until December 1, 2004. The fields in this inventory are being expanded to facilitate the delineation of the materials of construction with respect to both the public and private sections of the service lines. In addition to the material information describe above, all verifiable information derived from other sources such as plumbers and from the District Department of Transportation road projects will be entered into the database. A schematic of this process is attached.

Status: CIS has been modified and is being tested. The modification will be available for data entry by December 1, 2004 per our schedule. WASA will have entered all backlogged data by March 1, 2005.

4. Materials Evaluation Used for Sampling

The Lead/Copper Rule requires 100 samples every six months. WASA has submitted its Lead and Copper Site Selection Criteria for 6-month Monitoring Periods that outlines rationale used for selection as well as the addresses selected for routine sampling. The material of the services for each address is listed in Appendix C, Table 2 of the statement of criteria previously submitted to EPA. The material determination is derived from WASA's current inventory of service material. WASA's plan for evaluating the material of the service for its routine monitoring is as follows:

1. For each address of the current list of addresses for routine monitoring WASA will positively determine the material of the service from the main to the property line, and from the property line to the residence using either no-dig technology or test pits, or a combination.

2. WASA will report the results to EPA by January 1, 2005.

3. WASA will make any needed modifications to its site selection for routine monitoring based on the January report and will submit these for EPA approval as required by the regulations.

Status: The November 23, 2004 telephone conference with you and other EPA officials established that the need for this portion of the plan is superseded by the plan for routine sampling submitted by DC WASA in conjunction with paragraph 75. Therefore, WASA does not intend to implement the plan element #4.

Sincerely,

John T. Dunn
Chief Engineer/Deputy General Manager